



U.S. Fish & Wildlife Service  
Sacramento Fish & Wildlife Office  
Species Account  
DELTA GREEN GROUND BEETLE  
*Elaphrus viridis*



**CLASSIFICATION:** Threatened

Federal Register 45:52807; August 8, 1980

[http://ecos.fws.gov/docs/federal\\_register/fr450.pdf](http://ecos.fws.gov/docs/federal_register/fr450.pdf)

This species is undergoing a 5-year review.

The results have not been published yet.

Read March 22, 2006 [news release](#) announcing the review.



**CRITICAL HABITAT:** Designated

Federal Register 45:52807; August 8, 1980

[http://ecos.fws.gov/docs/federal\\_register/fr450.pdf](http://ecos.fws.gov/docs/federal_register/fr450.pdf)

**RECOVERY PLAN:** Final

Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon, 12/15/2005

[http://ecos.fws.gov/docs/recovery\\_plan/060614.pdf](http://ecos.fws.gov/docs/recovery_plan/060614.pdf)

On 2/4/09, we published a [5-year review](#) (PDF 19 MB), recommending no change of listing status.

**DESCRIPTION**

The delta green ground beetle is approximately 0.6 centimeter (0.25 inch) long. It is typically brilliant metallic green and bronze. There are two slightly different color forms. Most adults are metallic green with bronze spots on the elytra (first pair of wings). Some adults lack the spots and are nearly uniform metallic green.

Larvae of the delta green ground beetle are seldom seen due to their small size and perhaps also because they hide under dense vegetation or in cracks in the ground. It is also difficult to differentiate them from other ground beetle larvae in the field.

The preferred habitat of the delta green ground beetle is not well understood. Some entomologists believe that the species prefers more open habitats in the grassland-playa pool matrix where the beetle is found, such as edges of pools, trails, roads and ditches. However, this may be because denser cover hinders observation of the beetles elsewhere. Adults may also occur in the surrounding grasslands.

Based on the study of similar *Elaphrus* species, researchers believe that Delta green ground beetles are generalized predators. Their primary food may be springtails.

Adult females probably produce one generation per year. Adults seem to be active from February until mid-May, after which they enter an inactive phase called a diapause. This allows them to survive the dry Sacramento Valley summer.

## DISTRIBUTION

To date, the delta green ground beetle has only been found in the greater Jepson Prairie area in south-central Solano County, California. See the upcoming 5-year review for more information.

## THREATS

A significant concern is that, due to its extremely limited distribution and population. The species presently occupies less than 2,800 hectares (7,000 acres).

Another continuing threat is related to natural gas exploration and production. Natural gas reserves occur in subterranean pockets in the Jepson Prairie area, and exploratory drilling for these reserves could pose a threat. In addition, such drilling may necessitate new roads and related infrastructure, resulting in other potential indirect impacts. Also, ditches operated in association with Olcott Lake may drain it too rapidly to support the preferred habitat for the beetle.

There is some evidence indicating that the absence of grazing can have negative effects on the beetle. Extensive growth of nonnative grasses and forbs, which is often accompanied by development of a thatch of dead plant material on the ground and in the shallower portions of vernal pools, may threaten the species because the thatch may inhibit its normal foraging and other behavior and affect the availability of prey. Sheep grazing currently appears to be more compatible with delta green ground beetle populations than cattle grazing.

Illegal collecting poses a potential threat to delta green ground beetles. Beetle collecting is the pastime of a small but dedicated group of amateur and professional entomologists. Most of these collectors are conservation-minded, but a small minority collects obsessively or for financial gain without regard for law. The extent of illegal collecting of the delta green ground beetle is unknown, but the attractive appearance of the species and its rarity are likely to make it a target for unscrupulous collectors.

## REFERENCES FOR ADDITIONAL INFORMATION

Thelander, C. ed. 1994. Life on the edge: a guide to California's endangered natural resources. BioSystem Books. Santa Cruz, CA. p 412-413

U.C. Berkeley, Essig Museum of Entomology. [California's Endangered Insects](#).

Photo Credit: Larry Serpa

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